



Marine & Offshore

Certificate number: 57000/A0 BV

File number: AP 1944

Product code: 4482H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

MARINER SYSTEMS (UK) Ltd
Wokingham - UNITED KINGDOM

for the type of product

MARITIME PERSONAL COMPUTERS

HP Z4 G4 Workstation complete with Mariner Systems Mounting Kits MS3070 or MS3080

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 41B

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 14 Aug 2024

For Bureau Veritas Marine & Offshore,

At BV LONDON, on 14 Aug 2019,

Spencer Yule



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

The **HP Z4 G4 workstation** is a maritime personal computer. Each workstation must be installed in conjunction with appropriate Mariner Systems Kit MS3070 for Desktop configuration or MS3080 for Tower configuration.

The **HP Z4 G4 workstation** is composed of the following modules:

1.1. Processor:

- All Intel Xeon Processors up to and including 4.0GHz (4.4GHz turbo) frequency, 19.25MB cache, 14 cores

1.2. Storage:

- 300GB 15000rpm SAS SFF
- 500GB SATA-6G 3.5" (7200rpm)
- 1TB SATA-6G 3.5" (7200rpm)
- 2TB SATA-6G 3.5" (7200rpm)
- 256GB SATA SSD
- 512GB SATA SSD
- 1TB SATA SSD
- 256GB Z Turbo Drive M.2 MLC SSD
- 512GB Z Turbo Drive M.2 SSD
- 256GB Z Turbo Drive M.2 TLC SSD
- 512GB Z Turbo Drive M.2 TLC SSD

1.3. Optical Drive:

- HP 9.5mm DVD ROM
- HP 9.5mm DVD Writer
- HP 9.5mm Slim Blu Ray Disc Writer

1.4. Graphic Card:

- NVIDIA Quadro P400 2GB
- NVIDIA Quadro P600 2GB
- NVIDIA Quadro P620 2GB
- NVIDIA Quadro P1000 4GB
- NVIDIA Quadro P2000 5GB
- AMD FirePro W2100 2GB
- AMD Radeon Pro WX 3100 4GB
- AMD Radeon Pro WX 4100 4GB

1.5. Network Interface Card:

- Intel Ethernet I219-LM PCIe Controller (integrated)
- Intel Ethernet I210-AT PCIe Controller (integrated)
- Intel I210-T1 PCIe x1 Gigabit NIC
- Intel i350-T2 PCIe Dual Port Gigabit NIC
- Intel i350-T4 PCIe 4- Port Gigabit NIC
- Intel X550-T2 10GbE Dual Port NIC
- Intel X710-DA2 10GbE SFP+ Dual Port NIC
- Intel 10GbE SFP+ SR Transceiver

1.6. Keyboard :

- HP Business Slim PS/2 Keyboard
- HP Business Slim USB Keyboard
- HP Smart Card CCID Keyboard

1.7. Mouse:

- HP PS/2 Mouse
- HP Optical USB Mouse
- HP USB Hardened Mouse

1.8. Miscellaneous:

- MicroSemi SmartHBA2100-4i4e Controller
- HP SD 4 Media Card Reader
- HP Serial Port Adapter
- HP Standard Cooling Solution

- HP Premium FIO Module
- HP Fan & Front Guide Kit
- HP Memory Cooling Solution

2. DOCUMENTS AND DRAWINGS :

- HP Z4 G4 Workstation QuickSpecs, Ver. 9, dated 21/09/2018
- MS3070 ASSEMBLY Drawing, No. MS3070_A, dated 12/11/2018
- MS3080 ASSEMBLY Drawing, No. MS3080_A, dated 12/11/2018
- RF 1007-MST-A Filter Drawing, No. DS 105-MST, Rev. 3

3. TEST REPORTS :

- Test report for HP Z4 G4 Workstation Test Unit A, Mariner Systems UK Ltd, TL18111, dated 22-01-2019
- Test report for HP Z4 G4 Workstation Test Unit B, Mariner Systems UK Ltd, TL18112, dated 22-01-2019
- Test report for HP Z4 G4 Workstation Test Unit C, Mariner Systems UK Ltd, TL18113, dated 22-01-2019

4. APPLICATION / LIMITATION :

- 4.1 - Bureau Veritas Rules and Regulations for the Classification of Steel Ships.
- 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.3 - The equipment fulfils the EMC requirements for installation on the Bridge and Deck Zone.
- 4.4 - The minimum safe distance at which the equipment may be mounted from a standard or a steering magnetic compass is not to be less than 600mm.
- 4.5 - Each workstation must be used in conjunction with the appropriate Mariner Systems Kit MS3070 or MS3080.

5. PRODUCTION SURVEY REQUIREMENTS :

- 5.1 - The above products are to be supplied by **MARINER SYSTEMS (UK) Ltd.** in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
- 5.3 - **MARINER SYSTEMS (UK) Ltd.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.
- 5.4 - **MARINER SYSTEMS (UK) Ltd.** has declared to Bureau Veritas the following production site(s):

Mounting Kits:
MARINER SYSTEMS (UK) LTD.
 Oaklands Park
 Wokingham
 Berkshire
 UNITED KINGDOM

Workstation:
HEWLETT PACKARD
 PO Box 692000
 Houston
 Texas
 77269-2000
 UNITED STATES OF AMERICA

6. MARKING OF PRODUCT :

- Maker's name or trade mark.
- Serial number of the unit.
- Equipment type or model identification under which it was type-tested.

7. OTHERS :

It is **MARINER SYSTEMS (UK) LTD., Wokingham - United Kingdom's** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

*** END OF CERTIFICATE ***